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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------|------------------------|
| 10/718,816 | 11/24/2003 | Sang-Hyuck Ha | 46056 | 3463 |
| 7590 08/28/2007 Stacey J. Longanecher Roylance, Abrams, Berdo & Goodman, L.L.P. Suite 600 1300 19th Street, N.W. Washington, DC 20036 | | | EXAMINER KUMAR, PANKAJ | |
| | | | ART UNIT 2611 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/718,816

Applicant(s)

HA ET AL.

Examiner

Pankaj Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-21 and 23-42 is/are allowed.
- 6) ☒ Claim(s) 1, 3 is/are rejected.
- 7) ☒ Claim(s) 2, 4-7 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, with respect to the rejection(s) of claim(s) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Response to Amendment

Claim Objections

2. Claim 22 is objected to because of the following informalities:
3. Claim 22 recites an apparatus but it is referring to claim 17 which is a method. It appears that the dependency needs to change. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim USPN 6,721,908 in view of Chen USPN 7,245,600.

6. As per claim 1, Kim teaches generating read addresses to read the code symbols according to the size (Kim 6721908 fig. 2, 3: 211, 311; paragraph 18: "An address generator 211 generates a read address for rearranging the sequence of data bits according to an input data

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data size L and an input clock, and provides the generated address”; paragraph 19: “An address generator 311 to generates a write address for restoring the sequence of the input data to the original state according to the input frame data size L and the input clock”) of the EP (Kim col. 1 line 21-22: “A parallel turbo encoder encodes an input frame of L information bit streams”); and reading the code symbols at the read addresses from the memories and outputting the read code symbols (Kim fig. 2: reading from memory 212 and outputting) to the turbo decoder (not in Kim but would be obvious as explained below).

7. Kim does not teach turbo decoder. Chen 7245600 teaches turbo decoder (Chen fig. 2: 214: paragraph 14: “The decoding function in decoder 214 may be in accordance with a turbo decoder or any other suitable algorithms”). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Chen into Kim since Kim suggests decoding (something broad) in general and Chen suggests the beneficial use of turbo decoding such as to when (Chen paragraph 4: “An encoder in a transmitter of the communication system may receive a packet of data for encoding. Each data packet may be transmitted in a time frame”) or to increase data rate in the analogous art of communication.

8. As per claim 3, Kim in view of Chen teach encoder packets have size but does not teach the specific sizes. It would have been obvious to one having ordinary skill in the art at the time the invention was made to pick a size since this is a matter of design choice. It has been held that a change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955). Also, it has been held that discovering an optimum value of

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a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Allowable Subject Matter

9. Claims 2, 4-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claim 22 would be allowable if rewritten to overcome the claim objection cited in the claim objections section above.

11. Claims 8-21, 23-42 are allowed.

12. The following is a statement of reasons for the indication of allowable subject matter:

The art of record does not suggest the respective claim combinations together and nor would the respective claim combinations be obvious with:

13. As per claims 8-17: generating read addresses and chip select signals for the memories using the size of the encoder packet in synchronization to a decoder clock signal; and outputting code symbols to the two constituent decoders according to the read addresses and the chip select signals.

14. As per claims 18-21, 23-30: a memory unit having the first, second and third memories, for storing the received code symbols separately as information symbols and parity symbols according to the size of the encoder packet; and read the code symbols from the first, second and third memories according to the size of the encoder packet.

15. As per claims 31-36: a memory unit having first, second and third memories, for storing the code symbols separately in the first, second and third memories according to the types of the

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code symbols and selecting code symbols as a turbo decoder input; and a memory controller for generating read addresses to read code symbols from the first, second and third memories according to the types of the code symbols.

16. As per claims 37-42: storing the code symbols separately in the first, second and third memories according to the types of the code symbols; generating read addresses to read code symbols as a turbo decoder input from the first, second and third memories according to the type of the code symbols.

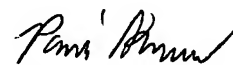
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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (571) 272-3011. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Pankaj Kumar
Primary Examiner
Art Unit 2611

PK